AMENDMENTS TO THE CLAIMS

1. (Currently Amended) In an electronic device, a method, comprising the steps of:

providing input color data for a group of pixels in an input color space, wherein one or more pixels contain input color data that is repeated;

building an intermediate table for storing the input color data <u>for each pixel in the group</u>, wherein each different input color data <u>corresponding to a pixel in the group</u> is assigned an index in the intermediate table <u>and wherein the index is a hash function of the different input color data</u>;

storing the indices in an index array, wherein each index is stored at a position corresponding to a position in the input color data <u>of the input color data assigned to the index</u>;

building an intermediate palette for storing the input color data corresponding to the indices, wherein each input color data appears once in the intermediate palette;

converting the color data in the intermediate palette to an output color data in an output color space, wherein the same input color data in different pixels is converted once to avoid repeated conversion calculations for the different pixels having the same input color data; and

for each pixel in the group of pixels substituting the corresponding converted output color data for each input color data.

2. (Currently Amended) The method of claim 1 further comprising <u>repeating for each of</u> <u>multiple groups of pixels in the input color space</u> the step of using a hash function to determine the index in the intermediate table <u>steps of providing, building an intermediate table, storing, building an intermediate palette, converting, and substituting</u>.

3. (Previously Presented) The method of claim 1 wherein the input color space comprises a (R, G, B) color space.

4. (Previously Presented) The method of claim 3 wherein the output color space comprises a (C, M, Y, K) color space.

5. (Previously Presented) The method of claim 3 wherein the output color space comprises a (C, M, Y) color space.

6. (Previously Presented) The method of claim 1 wherein the input color space comprises a grey scale color space.

7. (Previously Presented) The method of claim 1 wherein the output color space comprises a grey scale color space.

8. (Original) The method of claim 1 wherein the electronic device is a computer system.

9. (Original) The method of claim 1 wherein the electronic device is an image-reproducing apparatus.

10. (Original) The method of claim 1 wherein the electronic device is a copier.

11. (Original) The method of claim 1 wherein the electronic device is a printer.

12. (Original) The method of claim 1 wherein the group of pixels comprises a row of pixels.

13. (Currently Amended) In an electronic device, a method, comprising the steps of:

providing a set of input color data for pixels, said input color data encoding colors for the pixels in a first color space, wherein one or more pixels contain same color data that is repeated;

for each of the pixels, determining an index for the pixel based on the color data for the pixel;

building an intermediate table for assigning an index to the input color [[data;]] data, wherein the indices of the same input color data are the same and wherein the index is a hash function of the input color data;

storing the indices in an index array, wherein each index is stored at a position corresponding to a position in the input color data;

building an intermediate palette for storing the input color data corresponding to the indices, wherein each input color data appears once in the intermediate palette;

converting the input color data in the intermediate palette into an output color data in a second color space, wherein the same input color data in different pixels is converted once to avoid repeated conversion calculations for the different pixels having the same input color data; and

for each pixel, substituting the corresponding converted output color data for each input color data.

14. (Original) The method of claim 13 wherein one of the first color space and the second color space is a (R, G, B) color space.

15. (Original) The method of claim 13 wherein one of the first color space and the second color space is a grey scale color space.

16. (Original) The method of claim 13 wherein one of the first color space and the second color space is a (C, M, Y, K) color space.

17. (Original) The method of claim 13, wherein the method is performed by a processor.

18. (Currently Amended) A device for converting a set of input color representations of a set of pixels in an image wherein the input color representations are ordered in the set in an order of the pixels in the image, comprising:

a storage facility for storing an intermediate table, wherein the intermediate table holds, at indexed locations, the input color representations ~~of a set of pixels coupled with indices, each index representing a different input color data~~ and wherein the index of each location is a hash function of the input color representation stored at the location;

a storage facility for storing an index array, the index array storing the indices, wherein each index is stored at a position in the index array corresponding to a position of the color representations in the ~~input color data~~ set, that when hashed result in the index;

a storage facility for storing an intermediate palette, the intermediate palette storing the input color ~~data~~ representations corresponding to the indices, wherein each input color ~~data~~ representations appears once in the intermediate palette; and

a conversion facility for converting the set of input color ~~representation of the set of pixels~~ representations in the intermediate palette to output color representations in a second color space, wherein the same input color representation [[in]] of different pixels is converted once to avoid repeated conversion calculations for the different pixels having the same input color representation.

19. (Original) The device of claim 18 wherein the conversion facility is implemented by a processor.

20. (Currently Amended) An improved method of converting color image data for a group pixels from a first color space to a second color space, comprising:

mapping input color image data for the group of pixels in the first color space to indices, wherein the input color image data is stored in an intermediate table at positions of the indices[[,]] and wherein each index is a hash function of input color image data of a pixel in the group:

storing the indices in an index array, wherein each index is stored at a position corresponding to a position in the input color data;

building an intermediate palette for storing the input color data corresponding to the indices, wherein each input color data appears once in the intermediate palette;

converting the input color image data in the intermediate palette to an output color image data in the second color space, wherein the same input color image data in different pixels is converted once to avoid repeated conversion calculations for the different pixels having the same input color image data;

reconstructing the group of pixels in the second color space using the corresponding ~~converted~~ output color image data.

21. (Currently Amended) The method of claim 20, further comprising ~~a step of using a hash computer programming function to determine the index in the intermediate table each of the pixels in the group of pixels~~ repeating for each of multiple groups of pixels the steps of mapping, storing, building, converting and reconstructing.

22. (Currently Amended) The method of claim [[21]] 20, wherein ~~the indexed position of the pixels is also stored in an index array at a location in the index array that corresponds to a location in the group of pixels~~ positions of indices in the index array correspond to pixel locations in the group of pixels.

23. (Previously Presented) The method of claim 20 wherein the first color space comprises a (R, G, B) color space.

24. (Previously Presented) The method of claim 20 wherein the second color space comprises a (C, M, Y, K) color space.

25. (Previously Presented) The method of claim 20 wherein the second color space comprises a (C, M, Y) color space.

26. (Previously Presented) The method of claim 20 wherein the first color space comprises a grey scale color space.

27. (Previously Presented) The method of claim 20 wherein the second color space comprises a grey scale color space.